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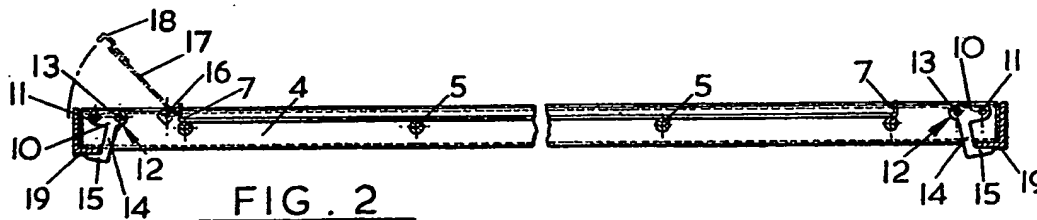
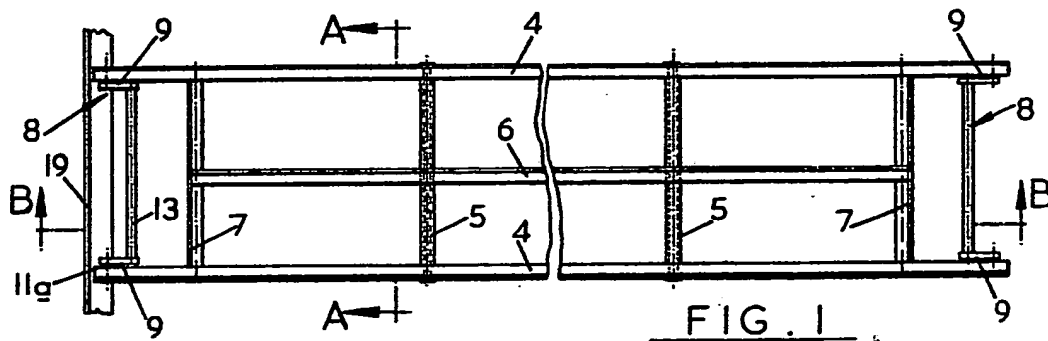
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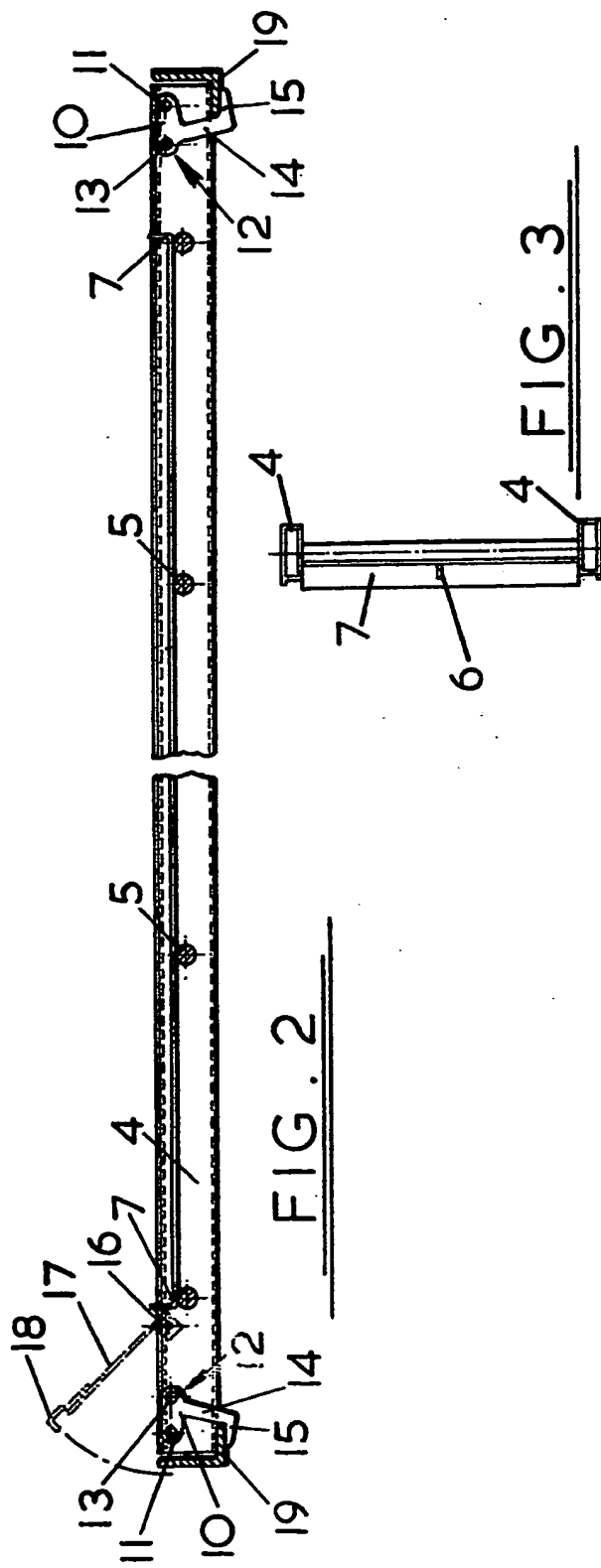
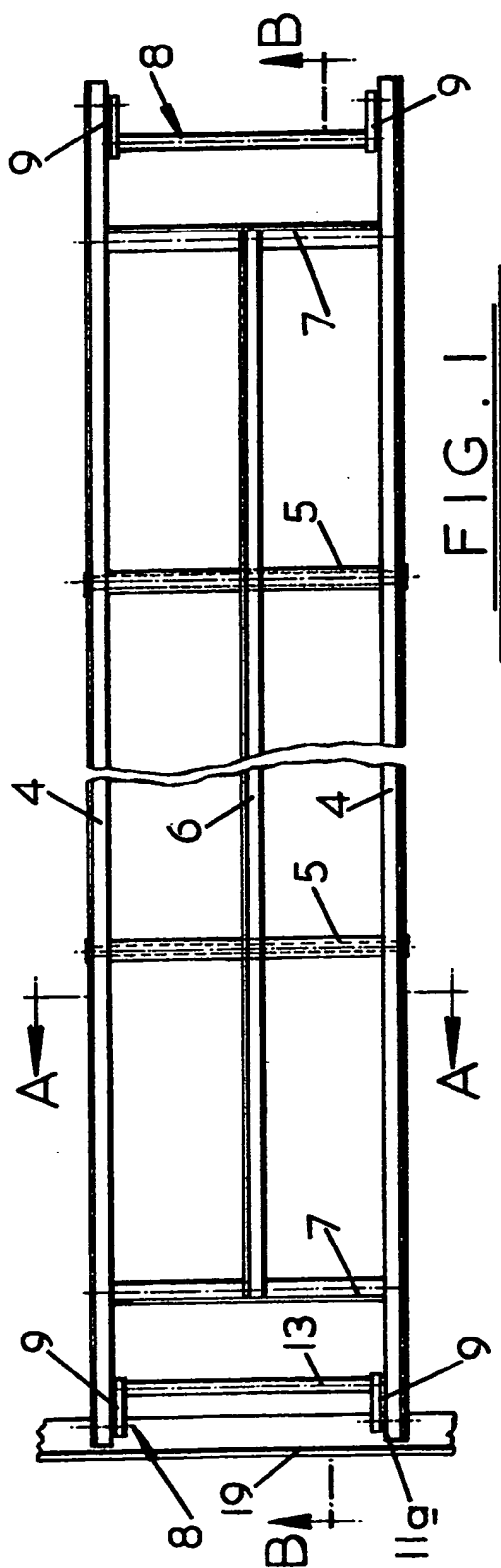
Scotland

(54) Stage boards

(57) A stage board for mounting on fixed structures including supporting frame members (4, 5, 6, 7). At each end, the stage board is provided with a clutch 8. Each clutch incorporates pivotal levers 9 engageable with a structure under the influence of counterweight shafts 13.



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SPECIFICATION

Improvements in or relating to stage boards

This invention relates to stage boards and particularly for use on scaffolding or the like.

- 5 When carrying out operations e.g. painting, of structures such as bridges, it is necessary to provide operators with stage boards on which they can stand in order to carry out whatever operation is required on the structure. It will be readily
- 10 understood that structures such as bridges are open to the elements and are particularly affected by strong winds. Accordingly, the stage boards on which the operators must stand require to be secured. One way of doing this is to secure stage
- 15 boards permanently to the structure such as by bolts. This, however, is relatively costly if such stage boards have to be provided along the full extensive lengths of each side of a bridge. If the stage boards are of a temporary nature i.e. they can be laid down and easily removed after use, it
- 20 will be readily apparent that strong winds can have a very serious disadvantageous effect if the stage boards are not adequately fastened down.

- An object of the present invention is to provide
- 25 a form of stage board which can be easily secured to and removed from a structure after use and which, at the same time, when in position can be securely fastened in that position without danger of being dislodged by, for example, high winds.

- 30 According to the present invention there is provided a stage board adapted to be supported on a structure, said board comprising a frame having a supporting surface, and a clutch mounted on said frame adjacent each end thereof, each of
- 35 said clutches comprising at least one lever freely pivotable under gravity into a structure-engaging position.

- Preferably, the lever of each clutch is provided with a counterweight which continuously tends to
- 40 maintain the lever in its structure-engaging position.

- An embodiment of the invention will now be described by way of example with reference to the accompanying drawing in which:—

- 45 Fig. 1 is a plan view of a stage board in accordance with the invention in which the wire mesh and clutch coverplates have been omitted for the sake of clarity;

- 50 Fig. 2 is a section on the line B—B of Fig. 1 and showing at the lefthand end a coverplate in chain dotted lines and

- Fig. 3 is a section on the line A—A of Fig. 1.

- Referring to the drawings, a stage board
- 55 comprises a pair of longitudinal hollow section frame members 4 interconnected by a plurality of tubular cross members 5. Extending longitudinally over the transverse members 5 and riveted thereto is a central mesh support strut 6. At each of its ends the strut 6 is fixedly secured as by riveting to
- 60 a pair of parallel angle members 7. The angle members 7 and central support strut 6 serve to locate and support a wire mesh platform which is secured by riveting to the framework around its peripheral edges i.e. to the angle members 7 and

- 65 the longitudinal frame members 4.

- Towards each end of the frame members 4 and extending between them, there is provided a clutch. Each clutch, which is indicated generally by the reference numeral 8, comprises a pair of
- 70 spaced levers 9. Each lever 9, as shown best in Fig. 2, comprises a first substantially horizontal arm 10 which is pivotably mounted at 11 to its associated longitudinal frame member 4, a "Tufnol" (Registered Trade Mark) washer 11a
- 75 being located between each lever and the adjacent frame member 4. At its end remote from the pivot, the arm 10 has formed thereon an extension 12. Between each of the extensions 12, a shaft 13 is fixedly secured thereto in order to
- 80 interconnect both of the levers 9. The shaft 13 acts as a counterweight tending to pivot the levers downwardly about their pivots 11. Projecting downwardly from the arm 10 of the lever is an
- 85 integral arm 14 which is deformed towards its lower end to provide a substantially horizontal abutment or tongue 15.

- Parallel to the angle members 7 and on the same side thereof as its associated clutch 8, there
- 90 is provided a pivot rod 16 for a clutch-locking means in the form of a coverplate 17. The coverplate 17 is provided at its free end with a locating angle 18.

- The above-described stage board is intended to be used in conjunction with existing L-section
- 95 angles 19 of a structure such as a bridge.

- In use, an operator merely raises the coverplates
- 100 17 and by grasping the shaft 13 pivots the arm 10 of one of the clutches 8 upwardly about pivot 11 and lowers that end of the stage board onto the horizontal portion of the angle 19. He then releases the shaft 13 which acts as a counterweight to cause the clutch 8 to pivot about the pivot 11 so that the abutment or tongue 15 engages below the underside of the horizontal portion of the angle 19. The levers 9 are maintained in this position by the counterweight effect. The same procedure is adopted for the clutch 8 at the other end of the stage board and when this is in position, both the clutch plates 17 are lowered so that the locating angle 18 on the clutch plate extends over and downwardly alongside the vertical portion of each angle 19.

- When the coverplates are in their horizontal position it will be seen that any upward movement
- 115 of the levers 9 which would tend to cause disengagement of the tongues 15 from the angles 19 is prevented, particularly in the event of high winds tending to lift the stage board upwardly from the angles 19. This locking action is assisted
- 120 by the counterweight action of the clutch mechanisms.

- Although in the above described embodiment, a lever 9 is provided at each side of the stage board, a satisfactory arrangement could also be
- 125 achieved utilising only a single lever. The embodiment described above is particularly adapted for the arrangement shown in the drawings where the stage board has to be located between opposed L-section angles 19. If,

however, the stage board has to be used with a different form of structure e.g. between round-section scaffold poles rather than L-section angles, the shape of the clutch levers can be modified to suit the components with which the levers have to engage. It will be understood, however, that the shape of these levers must be such as to engage with the components in order to prevent upward movement of the stage board.

It will be appreciated that the stage board can be of any suitable material but it has been found suitable to construct it of aluminium alloy components.

CLAIMS

1. A stage board adapted to be supported on a structure, said board comprising a frame having a supporting surface, and a clutch mounted on said frame adjacent each end thereof, each of said clutches comprising at least one lever freely pivotable under gravity into a structure-engaging position.

2. A stage board as claimed in claim 1; in which each clutch comprises a pair of levers spaced from each other at opposed sides of the frame, and counterweight means extending between the levers tending to pivot the levers into engagement with the structure.

3. A stage board as claimed in claim 1 or 2, in which each lever comprises a first arm pivotally mounted adjacent one of its ends on the frame, a second arm depending from the first arm adjacent its other end, and a structure-engaging abutment projecting from the second arm adjacent its lower end.

4. A stage board as claimed in any preceding claim, which each clutch is surmounted by releasable locking means which, when in position, is adapted to prevent upward pivotal movement of the lever or levers out of engagement with the structure.

5. A stage board as claimed in claim 4, in which the releasable locking means comprises a cover plate pivotally mounted on the stage board.

6. A stage board as claimed in any preceding claim in which the frame comprises a pair of longitudinal frame members between which the clutches extend, a plurality of rigid transverse frame members extending between the longitudinal members intermediate the clutches, and a wire mesh platform forming the supporting surface of the stage board and fixedly secured to the frame members.

7. A stage board substantially as hereinbefore described with reference to the accompanying drawing.